

Amendments to the Specification

Please replace the paragraph beginning at page 6, line 9, with the following rewritten paragraph:

The excitation signal  $I_{En}$  comprises a succession of  $n$  pulses, e.g. having a duty ratio of 0.5. The number of pulses  $n$  making up the excitation signal is such that  $n \neq 1$ . The frequency spectrum of each pulse includes at least an excitation frequency  $f_e$  close to the resonant frequency of the transducer, e.g. 1 MHz. Thus, since the transducer is comparable to an oscillator, when it is subjected to a succession of pulses, each pulse being substantially in the form of a squarewave, it will be put into conditions of sustained periodic oscillation, for a length of time that is associated with the number of pulses making up the excitation signal. The ultrasound signal emitted by the emitter transducer towards the receiver transducer through the medium between the two transducers results from the excitation signal whose characteristics are described above. At the receiver transducer, this wave gives rise to the receive signal  $SR_n$ . The ultrasound signal and the resulting electrical receive signal as output by the receiver transducer typically have the form of a packet of waves, i.e. of an oscillation of amplitude that increases, reaches a maximum, and subsequently decreases. Since amplitude decreases when the emitter transducer is no longer subjected to the excitation signal, the signal then behaves as a damped oscillation.

Please replace the paragraph beginning at page 7 line 1 with the following rewritten paragraph:

The first oscillation  $P_1$  of the receive signal has an amplitude  $V_{\max}(1)$  that is low, but nevertheless greater than the trigger threshold  $V_{\text{trig}}$ , enabling it to be detected by a suitable electronic circuit. However, the  $i^{\text{th}}$  oscillation  $P_i$  of the receive signal has an amplitude  $V_{\max}(i)$  which is much greater than the trigger threshold  $V_{\text{trig}}$ . It is therefore clear that the error in measuring time that corresponds to the precise instant at which the threshold voltage crossing is detected decreases with increasing amplitude. Consequently, the error in the  $i^{\text{th}}$  ~~osculation~~ oscillation  $P_i$  is much smaller than the error on the first oscillation  $P_1$ . In order to minimize error in measuring propagation time, it is therefore preferable to measure an intermediate propagation time on the  $i^{\text{th}}$  oscillation, and then correct the measurement by subtracting the time that elapses between the first oscillation and the  $i^{\text{th}}$  oscillation being detected.

Please replace the abstract on page 17 with the following rewritten abstract:

#### A B S T R A C T

~~A METHOD AND APPARATUS FOR MEASURING THE PROPAGATION TIME  
OF A SIGNAL, IN PARTICULAR AN ULTRASOUND SIGNAL~~